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FILE 'HOME' ENTERED AT 10:50:06 ON 30 JUN 2010

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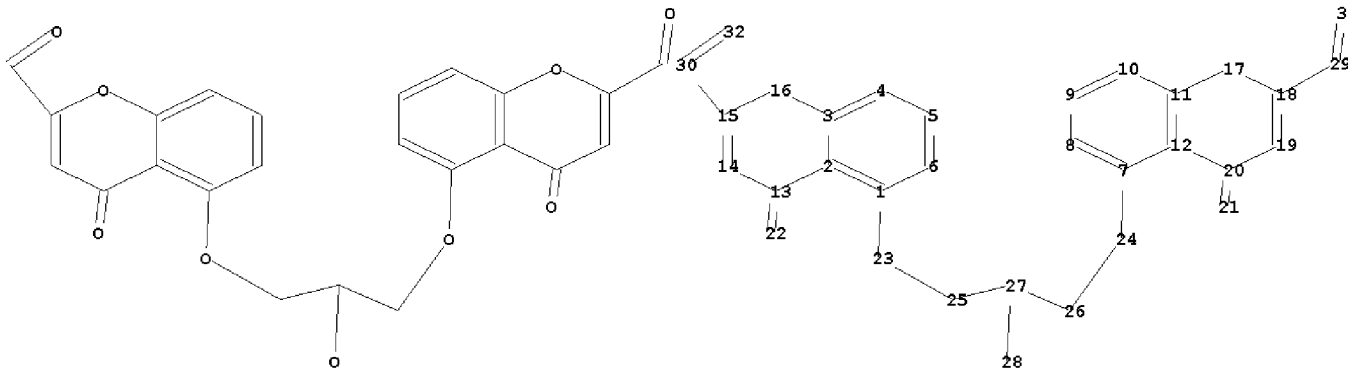

chain nodes :
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ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
chain bonds :
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30-32
ring bonds :
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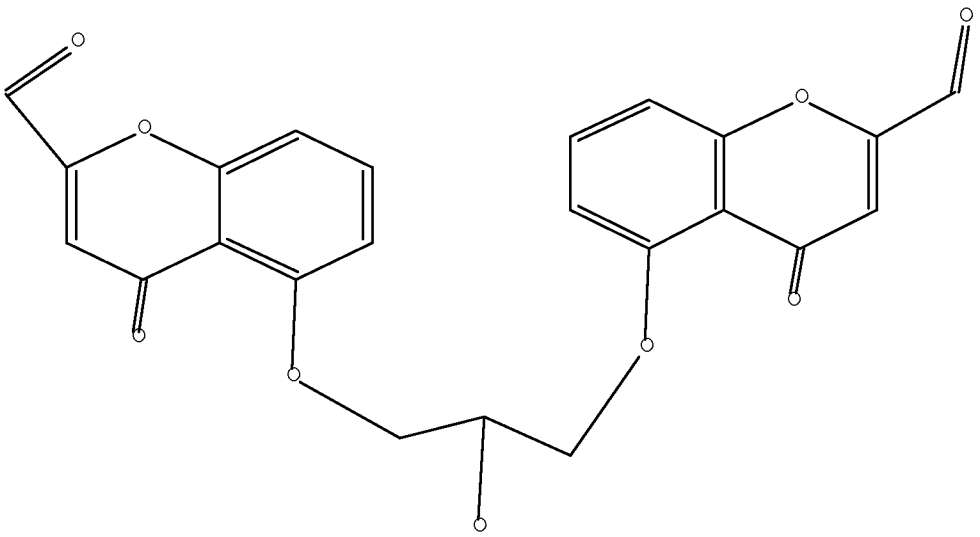
12-20 13-14 14-15 15-16 17-18 18-19 19-20
exact/norm bonds :
1-23 7-24 13-22 20-21 23-25 24-26 27-28 29-31 30-32
exact bonds :
2-13 3-16 11-17 12-20 13-14 14-15 15-16 15-30 17-18 18-19 18-29 19-20
25-27 26-27
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12
isolated ring systems :
containing 1 : 7 :

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS
26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



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=> s l1
SAMPLE SEARCH INITIATED 10:50:55 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 24 TO ITERATE

100.0% PROCESSED 24 ITERATIONS 21 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 187 TO 773
PROJECTED ANSWERS: 146 TO 694

L2 21 SEA SSS SAM L1

=> s l1 ful
FULL SEARCH INITIATED 10:51:02 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 668 TO ITERATE

100.0% PROCESSED 668 ITERATIONS 530 ANSWERS
SEARCH TIME: 00.00.01

L3 530 SEA SSS FUL L1

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CAplus now includes complete International Patent Classification (IPC)
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```
=> s l3
L4        2459 L3

=> d abafbib hitstre 2440-2459
'ABAFBIB' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'
'HITSTRE' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'
an arrow prompt (=>).  Examples of formats include: TI; TI,AU; BIB,ST;
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to view a specified Accession Number.
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=> d his

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     FILE 'REGISTRY' ENTERED AT 10:50:31 ON 30 JUN 2010
L1             STRUCTURE UPLOADED
L2           21 S L1
L3          530 S L1 FUL

     FILE 'CAPLUS' ENTERED AT 10:51:09 ON 30 JUN 2010
L4         2459 S L3

=> d l4 abs fbib hitstr  2440-2459

L4   ANSWER 2440 OF 2459  CAPLUS  COPYRIGHT 2010 ACS on STN
GI   For diagram(s), see printed CA Issue.
AB    The title compds. (I), in which X is a polymethylene or a
      hydroxypolymethylene, and R is H, HO, alkoxy hydroxyalkoxy, or alkenyl, are
      described.  I are useful in the treatment of allergic phenomena such as
      asthma, hayfever, urticaria, and auto-immune diseases, and they augment the
      action of antisera.  They were prepared by first joining 2 moles of a chromone
      precursor by the group X to form II, then forming the 4-pyrone ring in II to
      form I.  A mixture of 2,6-dihydroxy-4-methoxyacetophenone (III) and
      epichlorohydrin was added to a solution of EtONa in EtOH and the mixture
      refluxed for 4.5 hr to yield II(OXO = 3-OCH2CH(OH)CH2O-3', R = 5-MeO) (IV).
      In another exp., a mixture of Br(CH2)5Br, III, K2CO3, a trace KI, and Me2CO
      was refluxed for 4 days to give II (OXO = 3-O(CH2)5-O-3', R = 5-MeO).  A
      solution of IV and (CO2Et)2 in dioxane-EtOH was added to a solution of EtONa
      in EtOH and the mixture refluxed for 4 hr to yield I (OXO = 5-OCH2CH(OH)CH2O-
      5', R = 7-MeO).  Addnl. 9 I and their disodium salts, and 9 II are described.
AN   1971:111916  CAPLUS Full-text
DN   74:111916
OREF 74:18129a,18132a
TI   Bischromonyloxy compositions for inhibiting the effects of antigen
     antibodies
PA   Fisons Pharmaceuticals Ltd.
SO   Fr. M., 17 pp.
     CODEN: FMXXAJ
DT   Patent
LA   French
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI FR 6893 19690604 FR
GB 19660705
GB 19660714

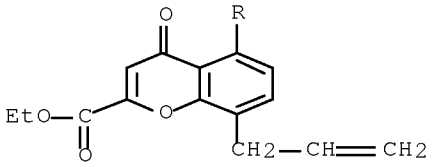
OS MARPAT 74:111916

IT 23915-70-0P 23915-71-1P 23937-54-4P
23937-89-5P 31437-68-0P 31545-45-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

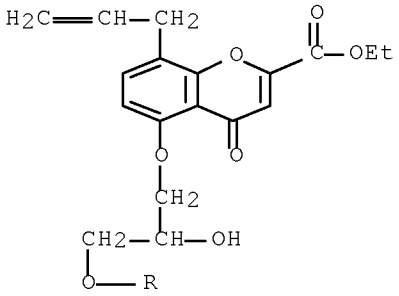
RN 23915-70-0 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxytrimethylene)dioxy]bis[8-allyl-4-oxo-, diethyl ester (8CI)
(CA INDEX NAME)

PAGE 1-A



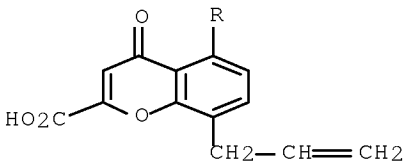
PAGE 2-A



RN 23915-71-1 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxytrimethylene)dioxy]bis[8-allyl-4-oxo- (8CI) (CA INDEX
NAME)

PAGE 1-A



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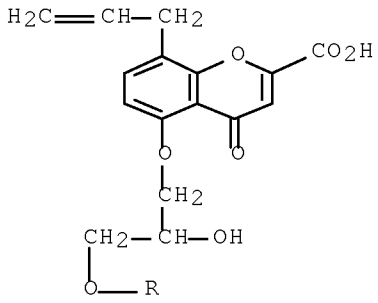
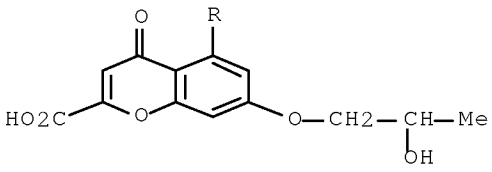


RN 23937-54-4 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxytrimethylene)dioxy]bis[7-(2-hydroxypropoxy)-4-oxo- (8CI) (CA INDEX NAME)

PAGE 1-A



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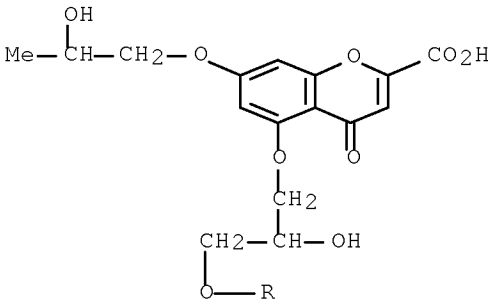
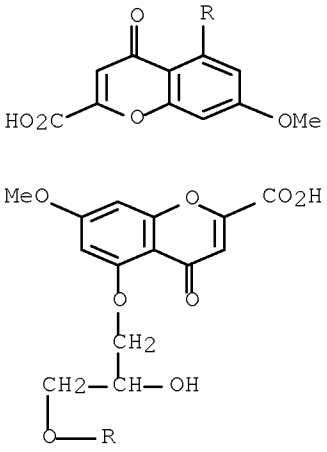
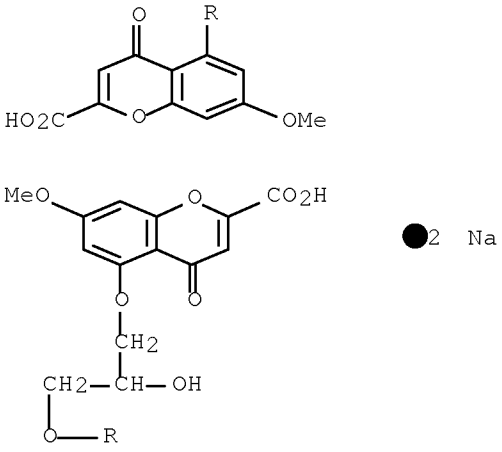


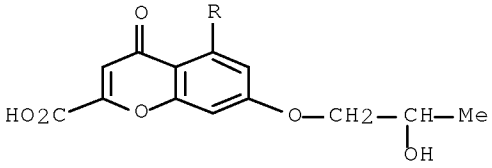
RN 23937-89-5 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[7-methoxy-4-oxo- (CA INDEX NAME)

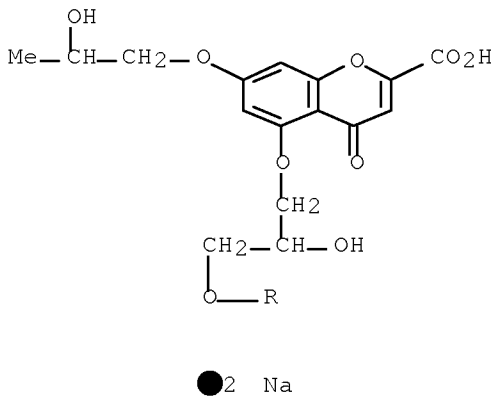


RN 31437-68-0 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[7-methoxy-4-oxo-, disodium salt (9CI) (CA INDEX NAME)



RN 31545-45-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxytrimethylene)dioxy]bis[7-(2-hydroxypropoxy)-4-oxo-, disodium salt (8CI) (CA INDEX NAME)





L4 ANSWER 2441 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB The action of disodium cromoglycate (I) on reagin (type II) reactions was studied in the rat. Passive cutaneous anaphylaxis was substantially inhibited when 0.5 mg I/kg was given i.v. with antigen to rats, and 2 mg gave complete inhibition. To determine the specificity of the drug, rats were sensitized at different times with both rat reagin and rabbit hyperimmune serum. When given with the antigens, 8 mg I/kg completely inhibited both passive cutaneous anaphylaxis and mast cell disruption induced by rat reagin. Smaller doses inhibited only mast cell disruption. The effects of the drug on the release of spasmogens from sensitized rat lung challenged with antigen were studied in the presence of isolated guinea pig ileum. Given with the antigen, 10 μg I/ml caused an average of 40% reduction in the height of ileal contraction, while 100 μg/ml caused a 64% reduction The drug had no effect on the response to spasmogens added to the bath; thus, it must have inhibited the antigen-induced release of these substances. The results show that I possesses unusual activity in inhibiting reagin reactions and should be useful both as a drug and in the study of allergies.

AN 1971:97144 CAPLUS Full-text

DN 74:97144

OREF 74:15791a,15794a

TI Disodium cromoglycate a specific inhibitor of certain reagin (type II) antibody-antigen reactions

AU Blair, A. M. J. N.; Clarke, Alan James

CS Fisons Pharm. Res. Lab., Loughborough/Leicester, UK

SO Cell. Humoral Mech. Anaphylaxis Allergy, Proc. Int. Symp. Can. Soc. Immunol., 3rd (1969), Meeting Date 1968, 114-18. Editor(s): Movat, H. Z. Publisher: Karger, Basel, Switz.
CODEN: 22XMAR

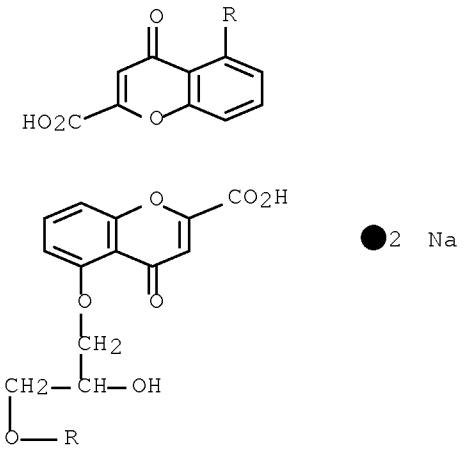
DT Conference

LA English

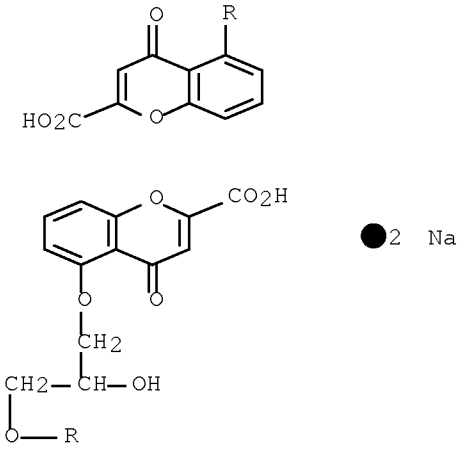
IT 15826-37-6
RL: BIOL (Biological study)
(reaginic antibody-antigen reaction in relation to)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



L4 ANSWER 2442 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN
GI For diagram(s), see printed CA Issue.
AB In vitro studies using rat s.c. connective tissue sensitized with rat reagin revealed that disodium cromoglycate (I) inhibited the allergic release of histamine if present during antigenic challenge, but when present during sensitization had no effect on antigen-induced release of histamine provided that I was removed prior to challenge. Tissue which had undergone a primary antigen challenge in the presence of I failed to release histamine upon removal of I and rechallenge, indicatng that antigen/antibody interaction occurred in the presence of the compound, resulting in desensitization to a subsequent antigen challenge. Results from in vivo passive cutaneous anaphylactic(PCA) reactions using tissue sites sensitized with 2 reaginic antibodies, which permitted a sequence of antigen challenges, demonstrated that it was possible to desensitize tissue, without the release of the anaphylaxis mediators, by an antigen challenge and I treatment. In these sites sensitized by 2 antibodies, the immunol. reactivity was maintained following a primary antigen challenge and I treatment, as a subsequent challenge with the dissimilar antigen produced a good PCA reaction. Thus, I may act directly or indirectly at a stage following antigen antibody reaction, but prior to the release of anaphylaxis mediators.
AN 1971:40889 CAPLUS Full-text
DN 74:40889
OREF 74:6585a,6588a
TI Mode of action of disodium cromoglycate. Studies on immediate type hypersensitivity reactions using 'double sensitization' with two antigenically distinct rat reagins
AU Orr, Thomas S. C.; Pollard, M. C.; Gwilliam, Jessie; Cox, James S. G.
CS Res. Dev. Lab., Fisons Pharm. Ltd., Loughborough/Leicestershire, UK
SO Clinical and Experimental Immunology (1970), 7(5), 745-57
CODEN: CEXIAL; ISSN: 0009-9104
DT Journal
LA English
IT 15826-37-6
RL: BIOL (Biological study)
(histamine release response to, in allergy)
RN 15826-37-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L4 ANSWER 2443 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB Release of anaphylactic mediator (AM) in vitro from lung slices of egg albumen-sensitized guinea pig after addition of egg albumen was not affected by the presence of cromoglycate (I). Incubation of I with the liver homogenates of the untreated guinea pig could not convert I to any active derivative stimulating the AM release. A slight inhibition of AM release by I was found when the guinea pig was sensitized by egg albumen supplemented with Freund's adjuvant. When monkeys (Macaca irus) had been sensitized by the serum of a human with housedust allergy, the AM release from the lung slices upon adding the reagin-containing serum was significantly inhibited by I. The inhibitory action of I is associated with the reagin-anaphylactic system.

AN 1971:21708 CAPLUS Full-text
DN 74:21708
OREF 74:3499a,3502a

TI Effect of disodium cromoglycate on the anaphylactic mediator release from lung of some animal species

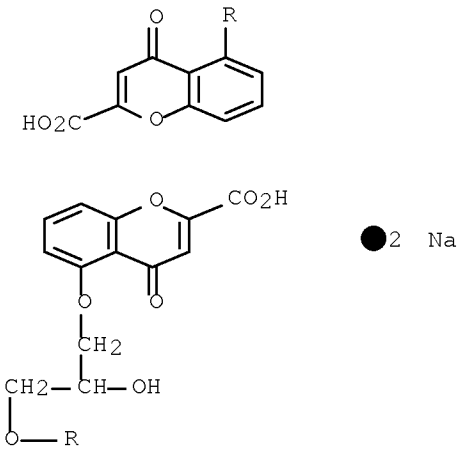
AU Koda, Akihide; Nagai, Hiroichi; Hiramatsu, Masahiko; Katsura, Eiji
CS Gifu Pharm. Coll., Gifu City, Japan

SO Arerugi (1970), 19(8), 597-604
CODEN: ARERAM; ISSN: 0021-4884
DT Journal
LA Japanese

IT 15826-37-6
RL: BIOL (Biological study)
(anaphylaxis response to)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



L4 ANSWER 2444 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB The 4 hr passive cutaneous anaphylaxis reaction (PCA) in rats induced by rat anti-dinitrophenyl 7Sγ2 antibody has been investigated and compared with the rat reagin-induced PCA reaction. Time course studies revealed that the PCA reaction was made up of at least 2 parts, an early immediate reaction which involved mast cell degranulation, was inhibited by disodium cromoglycate and by cyproheptadine and a late reaction unaffected by disodium cromoglycate, by cyproheptadine, and by an anti-SRS-A agent, diethylcarbamazine. The early part of the 7S γ2 reaction was comparable to the rat reagin PCA reaction whereas the later part of the 7S γ2 reaction does not appear to involve similar pathways or mediators.

AN 1970:496795 CAPLUS Full-text

DN 73:96795

OREF 73:15799a,15802a

TI Passive cutaneous anaphylaxis in the rat with disodium cromoglycate. I. Cutaneous reactions induced by an anti-DNP 7Sγz antibody

AU Orr, Thomas S. C.; Gwilliam, Jessie; Cox, James S. G.

CS Res. Develop. Lab., Fisons Pharm. Ltd., Loughborough, UK

SO Immunology (1970), 19(3), 469-79
CODEN: IMMUAM; ISSN: 0019-2805

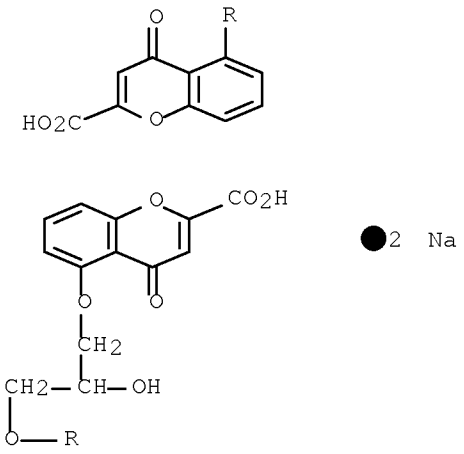
DT Journal

LA English

IT 15826-37-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immunosuppressant activity of, anaphylaxis in relation to)

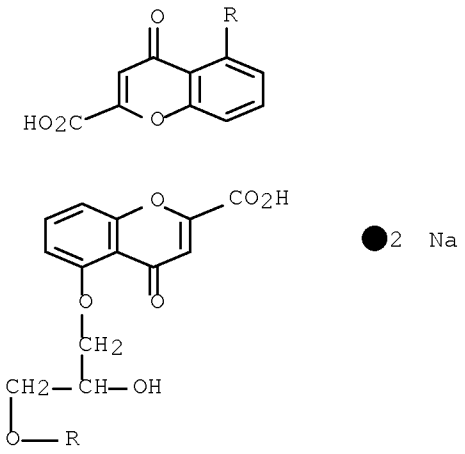
RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L4 ANSWER 2445 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN
AB Intracardiac injection of disodium cromoglycate (I) into the rat (2-8 mg/kg) inhibited passive cutaneous anaphylaxis and mast cell disruption induced by anti-egg albumin antiserum. Suppression of liberation of the antigen-antibody reaction mediator by I is suggested.
AN 1970:453970 CAPLUS Full-text
DN 73:53970
OREF 73:8875a,8878a
TI Inhibiting effect of disodium cromoglycate on passive cutaneous anaphylaxis in rats
AU Sudo, Morio; Yoshida, Toru
CS Iwate Med. Coll., Morioka, Japan
SO Arerugi (1970), 19(4), 250-9
CODEN: ARERAM; ISSN: 0021-4884
DT Journal
LA Japanese
IT 15826-37-6
RL: BIOL (Biological study)
(anaphylaxis inhibition by)
RN 15826-37-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



L4 ANSWER 2446 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB The possibility that disodium cromoglycate (1,3-bis(2-carboxychromon-5-yloxy)-2-hydroxypropane) (I) inhibits bronchoconstriction in humans with extrinsic asthma by specifically suppressing anaphylactic reactions initiated by interaction of antigen with antibodies was studied in rats. Passive cutaneous anaphylaxis was induced in rats by i.v. injecting antigenic worm exts. or dinitrophenylated protein conjugates 48 and 4 hr, resp., after the intradermal administration of rat antiserum containing anti-Nippost rongylus brasiliensis antibodies or an IgGa fraction from rat antiserum containing anti-dinitrophenyl bovine γ globulin. The simultaneous (in sep. syringes) injection of 25 mg I with the worm extract abolished the cutaneous anaphylactic reaction to this antigen; I also abolished the reaction when given immediately prior to the antigen. I partially inhibited the 4-hr passive cutaneous anaphylactic reaction in rats pretreated with IgGa antibodies. Since the 48-hr anaphylactic reaction is presumed to be mediated by the release of histamine or serotonin from sensitized mast cells upon contact with antigen, it is suggested that I inhibits the immunologic release of histamine and serotonin from these cells regardless of the immunoglobulin class of antibodies involved.

AN 1970:53175 CAPLUS Full-text

DN 72:53175

OREF 72:9719a,9722a

TI Effect of disodium cromoglycate on certain passive cutaneous anaphylactic reactions

AU Lopez, Manuel; Bloch, Kurt J.

CS Allergy and Arthritis Units, Massachusetts Gen. Hosp., Boston, MA, USA

SO Journal of Immunology (1969), 103(6), 1428-30
CODEN: JOIMA3; ISSN: 0022-1767

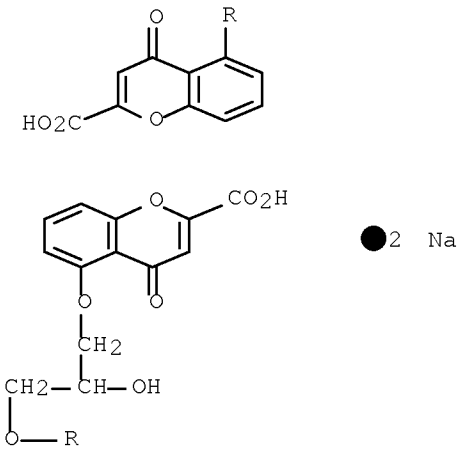
DT Journal

LA English

IT 15826-37-6
RL: BIOL (Biological study)
(anaphylaxis inhibition by, antibody types in relation to)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L4 ANSWER 2447 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB In the rat disodium cromoglycate showed a distinct antagonistic effect against noradrenaline and isopropylnoradrenaline and a weak antagonistic effect against histamine and bradykinin but it did not interfere with the effect of serotonin, with the amine release elicited by compound 1935 L, with the hypotension produced by kinin-forming substances such as ellagic acid or dextran sulfate, or with the development and course of anaphylactic shock.

AN 1970:41343 CAPLUS Full-text

DN 72:41343

OREF 72:7575a,7578a

TI Pharmacological properties of disodium cromoglycate [disodium 1,3-bis(2-carboxychromon-5-yloxy)-2-hydroxypropane tetrahydrate] in the rat

AU Lecomte, Jean

CS Univ. Liege, Liege, Belg.

SO Acta Allergologica (1969), 24(3), 226-31
CODEN: ACALAF; ISSN: 0001-5148

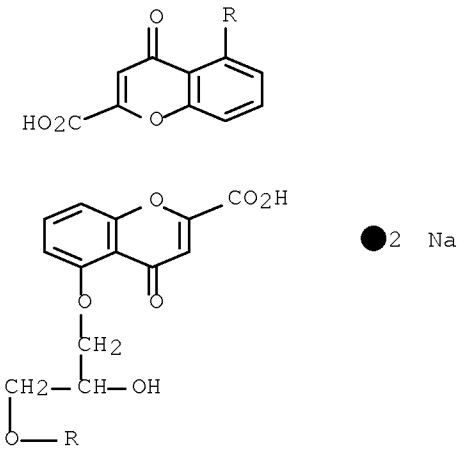
DT Journal

LA French

IT 15826-37-6
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacology of)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



L4 ANSWER 2448 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB Three in vitro models of the immediate hypersensitivity reaction, two involving reaginic antibodies in human lung and one involving reaginlike antibodies in rat lung, were used in laboratory investigations on disodium cromoglycate. The release of spasmogens after antibody-antigen reaction in each of these models was partially inhibited by disodium cromoglycate and it is suggested that this effect may be related to the clin. efficacy of the compound in allergic asthma.

AN 1970:29791 CAPLUS Full-text
DN 72:29791
OREF 72:5421a,5424a

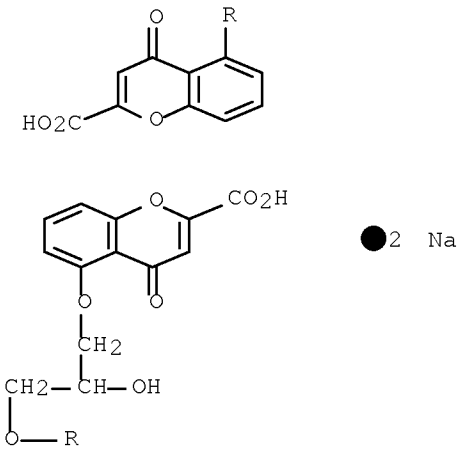
TI Disodium cromoglycate. Activity in three in vitro models of the immediate hypersensitivity reaction in lung

AU Sheard, Philip; Blair, A. M. J. N.
CS Fisons Pharm. Res. Lab., Loughborough, UK

SO International Archives of Allergy and Applied Immunology (1970), 38(2), 217-24
CODEN: IAAAAM; ISSN: 0020-5915
DT Journal
LA English

IT 15826-37-6
RL: BIOL (Biological study)
(hypersensitivity inhibition by, in lungs in allergy)

RN 15826-37-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L4 ANSWER 2449 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB Cromoglycate has been shown to be a potent inhibitor of histamine release by antigen from passively sensitized lung of man and monkey. Slight inhibition of histamine release was also produced in lung of actively sensitized monkey and in actively sensitized leukocytes of man. Reactions not consistently inhibited were: direct and Prausnitz-Kuestner skin tests in man, and histamine release from actively sensitized leukocytes of rabbit. There was no inhibition of the anaphylactic histamine release from guinea-pig lung, whether actively or passively sensitized.

AN 1970:11025 CAPLUS Full-text
DN 72:11025
OREF 72:1987a,1990a

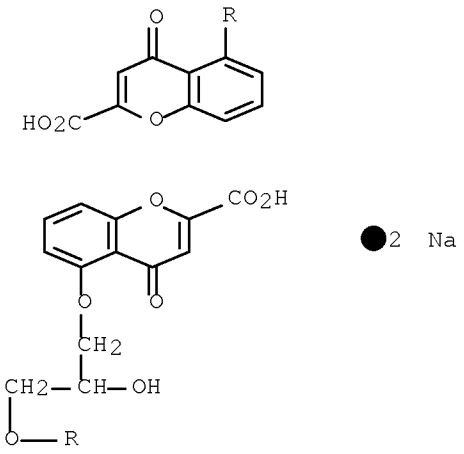
TI Inhibition of allergic reactions in man and other species by cromoglycate

AU Assem, E. S. K.; Mongar, J. L.
CS Dep. Pharmacol., Univ. Coll. London, London, UK

SO International Archives of Allergy and Applied Immunology (1970), 38(1), 68-77
CODEN: IAAAAM; ISSN: 0020-5915
DT Journal
LA English

IT 15826-37-6
RL: BIOL (Biological study)
(histamine liberation inhibition by, in allergy)

RN 15826-37-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



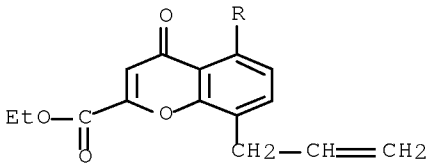
L4 ANSWER 2450 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN
GI For diagram(s), see printed CA Issue.
AB Compds. I, II, and III are prepd. from IV compds., where one of R2 and R3 is OH and one of R1, R3, and R4 is Ac. Thus, a mixture of 4,2,6-MeO-(HO)2C6H2Ac 9.1, epichlorohydrin 2.33 parts, NaOEt, and EtOH is refluxed 4.5 hrs. to give 5.45 parts 1,3-bis(2-acetyl-3-hydroxy-5-methoxyphenoxy)-2-propanol (V), m. 180-2°. A mixture of V 2.1, EtO2CCO2Et 3.7, and dioxane 30 is added to a solution of NaOEt in EtOH (prepared from Na 0.92 and EtOH 20), EtOH 20 parts is added, and the mixture is refluxed 4 hrs. and worked up to give 1.73 parts 1,3-bis(2-carboxy-7-methoxy-5-chromonyloxy)-2-propanol (VI), m. 245° (decomposition). Similarly prepared are the following I (R1 = H) (R, R2, R3, and m.p. given): (CH2)3, OMe, H, 288° (monohydrate); CHOH, OCH2CH(OH)Me, H, 244-6°; CHOH, H, allyl, 214-18° (decomposition); the following II (R1 = H) (R, R2, R3, and m.p. given): CHOH, OCH2CH(OH)Me, H, 160-1° (decomposition); (CH2)3, OMe, H, 159-70°; CHOH, H, allyl, 210-30°; the following III (R = H) (R1 and m.p. given): Me, 258-60° (dihydrate); CH2CH(OH)Me, 180-3°; and the following IV (R, R1, R2, R3, R4, and m.p. given): (CH2)3, Ac, OH, H, OMe, 146-7°; CHOH, Ac, OH, Ac, OH, 244-5°; CHOH, H, OH, Ac, OH, 251-3°; CHOH, H, OH, Ac, OCH2CH(OH)Me, 148-50°; CHOH, Ac, OH, H, OCH2CH(OH)Me, 201-3°; (CH2)3, H, OH, Ac, OMe, 130-2°; (CH2)3, OMe, H, OH, Ac, 145-8°; (CH2)3, OCH2CH(OH)Me, H, OH, Ac, 122°; CHOH, Ac, OH, allyl, H, -; CHOH, allyl, OH, Ac, H, 137-9°. II (R = CHOH, R1 = R3 = H, R2 = OCH2Ph) is heated with HBr in HOAc to give II (R = CHOH, R1 = R3 = H, R2 = OH); monohydrate m. 245-6°. VI and the I (R1 = H), II (R1 = H), and III (R = H) prepared are converted to the corresponding I (R1 = Na), II (R1 = Na), and III (R = Na). I (R = CHOH, R1 = Et, R2 = H, R2 = allyl) (m. 153-5°) is obtained by the EtO2CCO2Et cyclization reaction and converted to the I (R1 = H) compound Also prepared, according to known methods, are the following intermediates (m.p. given): 2,4-diacetyl-5-(2-hydroxypropoxy)resorcinol, 152-4°; 2,6,4-(HO)2[MeCH(OH)CH2O]C6H2Ac, 177-8°; 2,5,4-[HO)2[MeCH(OH)CH2O]C6H2Ac, 186-8°. III [R = Et, R1 = CH2CH(OH)Me] (m. 180-3°) is also obtained and converted to the III (R = H) compound 5,7-Dihydroxy-2-methylchromone is treated with Br(CH2)5Br to give 1,5-bis(5-hydroxy-2-methyl-7-chromonyloxy)pentane (m. 185°) which is converted to the di-Me ether (m. 208-9°); the ether is heated with KOH in EtOH to give IV [R = (CH2)3, R1 = H, R2 = OH, R3 = Ac, R4 = OMe], m. 130-2°.
AN 1969:501709 CAPLUS Full-text
DN 71:101709
OREF 71:18940h,18941a
TI α,ω-Bis(2-carboxychromonyloxy) alkanes
PA Fisons Pharmaceuticals Ltd.

SO Fr., 17 pp.
CODEN: FRXXAK
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 1533506		19680719	FR 1967-112960	19670704
			GB	19660705
			GB	19660714
DE 1593882			DE	
GB 1190193			GB	
GB 1190194			GB	
US 3519652		19700707	US	19670703
US 3705945		19721212	US	19700507

IT 23915-70-0P 23915-71-1P 23937-54-4P
23937-89-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 23915-70-0 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxytrimethylene)dioxy]bis[8-allyl-4-oxo-, diethyl ester (8CI)
(CA INDEX NAME)

PAGE 1-A



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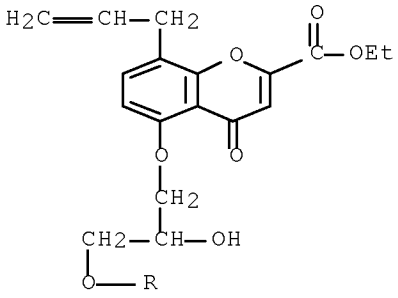
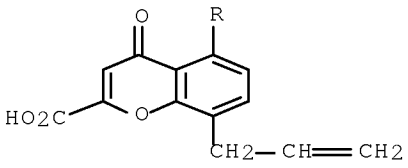


RN 23915-71-1 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxytrimethylene)dioxy]bis[8-allyl-4-oxo- (8CI) (CA INDEX
NAME)

PAGE 1-A



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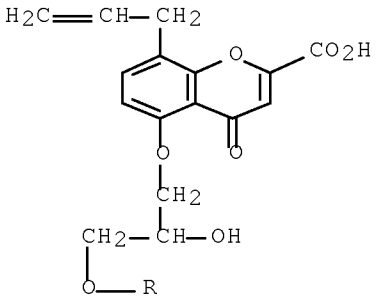
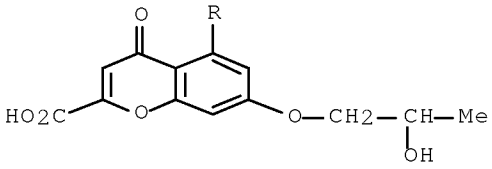
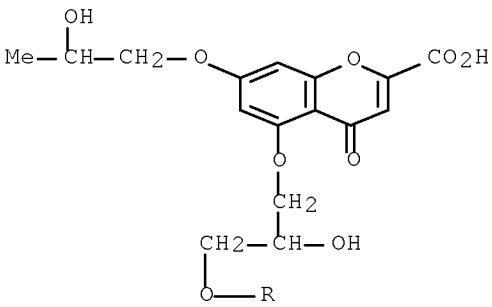


RN 23937-54-4 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxytrimethylene)dioxy]bis[7-(2-hydroxypropoxy)-4-oxo- (8CI) (CA INDEX NAME)

PAGE 1-A

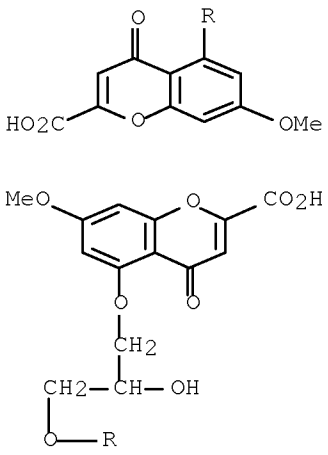


PAGE 2-A



RN 23937-89-5 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid,

5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[7-methoxy-4-oxo- (CA INDEX NAME)



L4 ANSWER 2451 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

GI For diagram(s), see printed CA Issue.

AB Diethers ArOXAr (I) where Ar is a 2-acetyl-3-hydroxyphenyl group, are treated with EtO2CCO2Et to give II; III, IV, and V are also prepared, V are prepared from ArOXOAr1 (VI). Thus, a solution of 1,3-bis(2-acetyl-3-hydroxyphenoxy)propane (VII) 6.9 in EtO2CCO2Et 15 is added to a solution of Na 3 in EtOH 30 and C6H6 50 parts; the mixture is refluxed 20 hrs. to give 4.5 parts 1,3-bis(2-carboxychromon-5-yloxy)propane (VIII) di-Et ester, m. 182-3° which is converted to VIII di-Na salt. Similarly prepared are the following II (X, R1, R2, R3, m.p. or decomposition pt.* given): CH2CH(OH)CH2, CO2Et, H, H, 180-2°; CH2CH(OH)CH2, CO2H, H, H, 241-2°*; CH2CH:CHCH2, CO2Et, H, H, 216-17°; CH2CH:CHCH2, CO2H, H, H, 193-5° (monohydrate); CH2CH(OH)CH2O(CH2)4OCH2CH(OH)CH2, CO2H, H, H, 80°* (dihydrate); (CH2)4, CO2Et, H, H, 195-9°; (CH2)4, CO2H, H, H, 228-30° (monohydrate); (CH2)5, CO2Et, H, H, 150-2°; (CH2)5, CO2H, H, H, 226-8° (monohydrate); (CH2)6, CO2Et, H, H, 154.5-5°; (CH2)6, CO2H, H, H, 228-30° (monohydrate; (CH2)10, CO2Et, H, H, 146.5-8°; (CH2)10, CO2Na, H, H, -; CH2CH(OH)CH2OCH2CH(OH)CH2, CO2H, H, H, 216-18° (monohydrate); CH2CH2OCH2CH2, CO2Et, H, H, 129-31.5°; CH2CH2OCH2CH2, CO2H, H, H, 219-20°; CH2CH(OH)CH(OH)CH2, CO2Et, H, H, 224-6°; CH2CH(OH)CH(OH)CH2, CO2H, H, H, 260-2° (dihydrate); CH2CH(OH)CH2CH2, CO2Et, H, H, 216-17°; CH2CH(OH)CH2CH2, CO2H, H, H, 226-7° (monohydrate; (CH2)5, CO2Et, H, Cl, 162-4°; (CH2)5, CO2H, H, Cl, 244°; CH2CH(OH)CH2, CO2Et, Me, H, 194-6°; CH2CH(OH)CH2, CO2Et, Me, H, 240-1° (monohydrate); CH2CH(OH)CH2, CO2Et, H, Et, 159-61°; CH2CH(OH)CH2, CO2H, H, Et, 193-4° (dihydrate); CH2CH2CHMeCH2CH2, CO2Et, H, H, 128-30°; CH2CH2CHMeCH2CH2, CO2H, H, H, 215-17° (monohydrate); o-phenylene, CO2Et, H, H, 204-6°; o-phenylene, CO2H, H, H, (tetrahydrate prepared), -; (CH2)8, CO2Et, H, H, 139-41°; (CH2)8, CO2H, H, H (monohydrate prepared), -; (CH2)9, CO2Et, H, H, 128-9°; (CH2)9, CO2H, H, H, 123-7°; CH2CH2, CO2Et, H, H, 264-5°; CH2CH2, CO2H, H, H, 262-3°; CH2C(CH2Cl)(CH2OH)CH2, CO2Et, H, H, 165-8°; CH2C(CH2Cl)(CH2OH)CH2, CO2K, H, H, (tetrahydrate prepared), -; dioxan-2,5-diyldimethylene, CO2Et, H, H, -, 285°; (CH2)5, Me, H, H, 140-3°; the following III (X, R1, R2, R3, and m.p. given): (CH2)5, Et, H, Me, 196-9°; (CH2)5, H, H, Me, 274-6°; CH2CH(OH)CH2, Et, H, Me, 191-3°; CH2CH(OH)CH2, H, H, Me, 272-5° (dihydrate); CH2CH(OH)CH2, Et, Cl, H, 199-202°; the following IV (X, R1, and m.p. given): (CH2)5, Et, -; (CH2)5, H, 275-7°; CH2CH(OH)CH2, Et,

187-9°; CH2CH(OH)CH2, H, 268-70° (dihydrate); the following V (X, R1, R2, and m.p. given): CH2CH(OH)CH2, 2-eth-oxycarbonylchromon-7-yl, Et, 193-4.5°; CH2CH(OH)CH2, 2-carboxychromon-7-yl, H, 194-200°; (CH2)5, 2-ethoxycarbon-ylchromon-7-yl, Et, 149-52°; (CH2)5, 2-carboxychromon-7-yl, H, 249-51°; CH2CH(OH)CH2, 2-ethoxycarbonyl-8-ethylchromon-5-yl, Et, 166-6.5°; CH2CH(OH)CH2, 2-carboxy-8-ethylchromon-5-yl, H, 190-2° (dihydrate); CH2CH(OH)CH2, 2-ethoxycarbonyl-6-chlorochromon-7-yl, Et, 166-8°; CH2CH(OH)CH2, 2-carboxy-6-chlorochromon-7-yl (Na salt), Na, -; CH2CH(OH)CH2, 2-ethoxycarbonylchromon-6-yl, Et, 164-6°; CH2CH(OH)CH2, 2-ethoxycarbonylchromon-8-yl, Et, 166-9°; 1,5-bis(2-carboxychromon-8-yloxy)pentane (IX) di-Et ester (m. 128-30°), IX monohydrate (m. 237-8°), and the di-Na salt, Ca salt, Mg salt, and dipiperidine salt of II [X = CH2CH(OH)CH2, R1 = CO2H, R2 = R3 = H]. II [X = CH2CH(OH)CH2OCH(CH2OH)CH2, R1 = CO2H, R2 = R3 = H] (m. 276-80°) is obtained as by-product in the preparation of the II (X = dioxan-2,5-diyldimethylene) compound II [X = (CH2)5, R1 = Me, R2 = R3 = H] (X) 5 is heated with SeO2 6 in dioxane 100 parts to give II [X = (CH2)5, R1 = CO2H, R2 = R3 = H] monohydrate (XI), m. 226-8°. X 2.7 is treated with BzH 1.5 and Na 0.294 parts in EtOH to give II [X = (CH2)5, R1 = CH:CHPh, R2 = R3 = H] (m. 217-20°) which is oxidized (KMnO4) to give XI, m. 226-8°. 1,4-Bis(4-hydroxyphenoxy)pentane (XII) 5.8 is treated with EtO2CC.tplbond.CCO2Et 6.8 parts to give 1.5 parts IV [X = (CH2)5, R1 = H] m. 270-1°. Also prepared, according to known methods, are the intermediates, VII (m. 184-5°) and XII (m. 110-12°), the following I intermediates (X, Ar, and m.p. given): CH2CH(OH)CH2, 2,3-Ac(HO)C6H3 (Q), 165-6°; CH2CH:CHCH2, Q, 145-6°; CH2CH(OH)CH2O(CH2)4OCH2CH(OH)CH2, Q, -; (CH2)4, Q, 219-21°; (CH2)5, Q, 131-3°; (CH2)6, Q, 147.5-8.5°; (CH2)10, Q, 102.5-4°; CH2CH(OH)CH2OCH2CH(OH)CH2, Q, 129-31°; CH2CH2OCH2CH2, Q, 120.5-1.5°; CH2CH(OH)CH(OH)CH2, Q, 211-12°; CH2CH(OH)CH2CH2, Q, 207.5-8.5°; (CH2)5, 4,2,3-Cl(Ac)(HO)C6H2, 96°; CH2CH(OH)CH2, 5,2,3-Me(Ac)(HO)C6H2, 185-6°; CH2CH(OH)CH2, 4,2,3-Et(Ac)(HO)C6H2, 135-7°; (CH2)5, 3,2-Ac(HO)C6H3, 103.5-4.5°; (CH2)5, 2,4,3-Me(Ac)(HO)C6H2 (R), 116-17°; CH2CH(OH)CH2, R, 151-3°; CH2CH2CHMeCH2CH2, Q, 123-4°; CH2CH(OH)CH2, 2,4,5-Cl(Ac)(HO)C6H2, 197-9°; (CH2)5, 3,4-Ac(HO)C6H3 (S), 107-9°; o-phenylene, Q, 148-53°; CH2CH(OH)CH2, S, 127-9°; (CH2)8, Q, 107-9°; (CH2)9, Q, 55-9°; CH2CH2, Q, 188-9°; oxetan-3,3-diyldimethylene, Q, 209-11°; dioxan-2,5-diyldimethylene, Q, 230-2°: the following VI (X = CH2CH(OH)CH2] (Ar, Ar1, and m.p. given): Q, 4,3-Ac(HO)C6H3, 182-5°; Q, 4,2,3-Et(Ac)(HO)C6H2, 102-3°; Q, 2,4,5-Cl(Ac)(HO)C6H2, 139-40°; Q, S, 184-5°; Q, 3,2-Ac-(HO)C6H3, 166-9°; and the following intermediates (m.p. given): VI [X = (CH2)5, Ar = 2,3-Ac(HO)C6H3, Ar1 = 4,3-Ac(HO)C6H3] 91-1.5°; 2-(2,3-epoxypropoxy)-6-hydroxyacetophenone, 61-3°; 6,2-HO[ClCH2CH(OH)CH2O]C6H3Ac, b1·5 166-8°; 5-(2,3-epoxypropoxy)-2-hydroxyacetophenone, 76.9°.

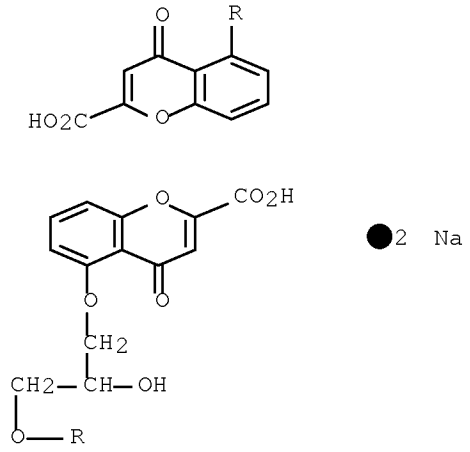
AN 1969:491309 CAPLUS Full-text
DN 71:91309
OREF 71:16994h,16995a
TI α,ω-Bis(2-carboxychromon-5-yloxy) alkanes
IN Fitzmaurice, Colin; Lee, Thomas Brian
PA Fisons Pharmaceutical Ltd.
SO Brit., 31 pp. Division of Brit. 1144905
CODEN: BRXXAA
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1144906		19690312	GB 1968-37765	19650325
	DE 1918142			DE	
	DE 1920365			DE	

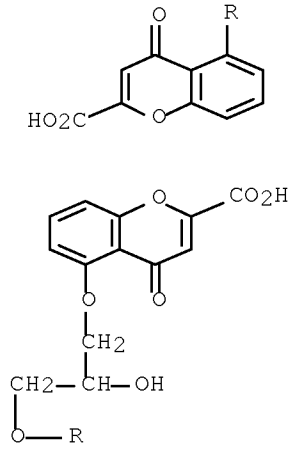
OS MARPAT 71:91309
IT 15826-37-6P 16110-51-3P 16129-86-5P
16129-88-7P 16130-23-7P 16130-25-9P

16139-24-5P 16139-25-6P 16146-53-5P
16150-45-1P 23874-48-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

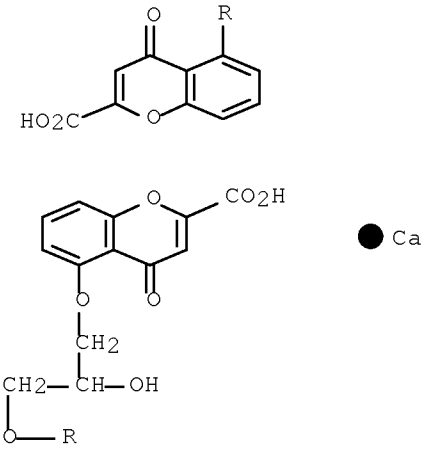
RN 15826-37-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2)
(CA INDEX NAME)



RN 16110-51-3 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo- (CA INDEX NAME)



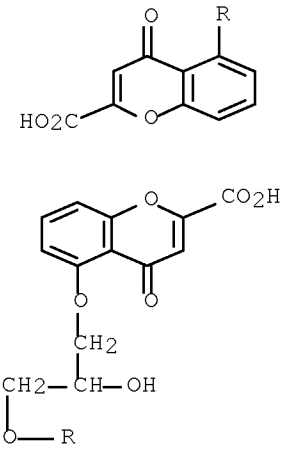
RN 16129-86-5 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxytrimethylene)dioxy]bis[4-oxo-, calcium salt (1:1) (8CI)
(CA INDEX NAME)



RN 16129-88-7 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, compd. with piperidine (1:2) (9CI) (CA INDEX NAME)

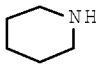
CM 1

CRN 16110-51-3
CMF C23 H16 O11

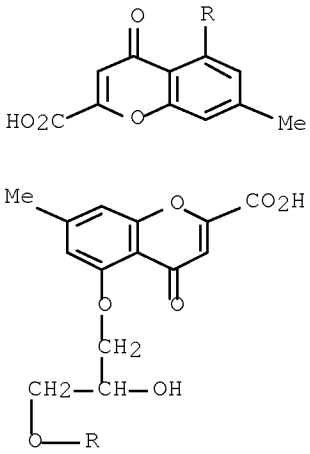


CM 2

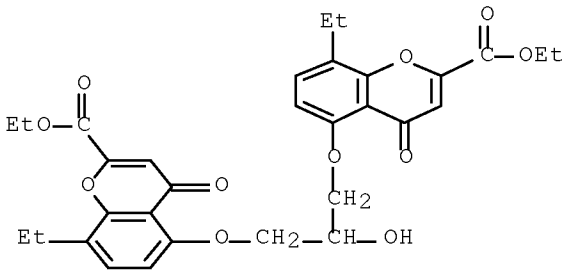
CRN 110-89-4
CMF C5 H11 N



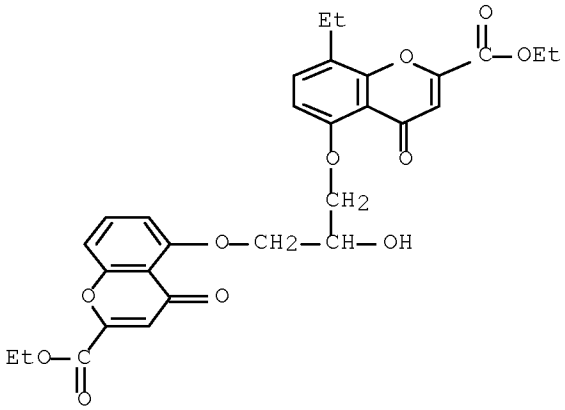
RN 16130-23-7 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[7-methyl-4-oxo- (CA INDEX NAME)



RN 16130-25-9 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxytrimethylene)dioxy]bis[8-ethyl-4-oxo-, diethyl ester (8CI) (CA INDEX NAME)

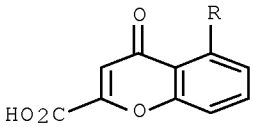


RN 16139-24-5 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5-[3-[[2-(ethoxycarbonyl)-4-oxo-4H-1-benzopyran-5-yl]oxy]-2-hydroxypropoxy]-8-ethyl-4-oxo-, ethyl ester (CA INDEX NAME)

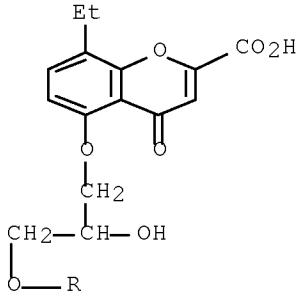


RN 16139-25-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5-[3-[(2-carboxy-4-oxo-4H-1-benzopyran-5-yl)oxy]-2-hydroxypropoxy]-8-ethyl-4-oxo- (CA INDEX NAME)

PAGE 1-A

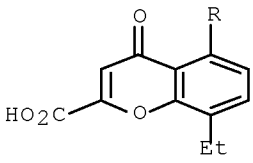


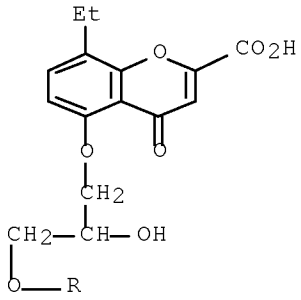
PAGE 2-A



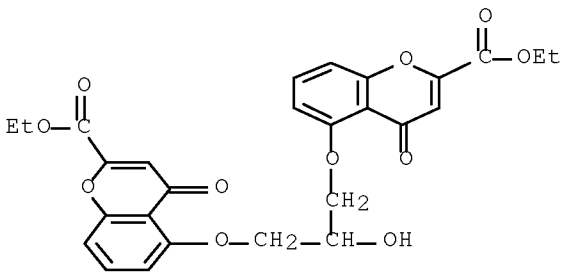
RN 16146-53-5 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[8-ethyl-4-oxo- (CA INDEX NAME)

PAGE 1-A

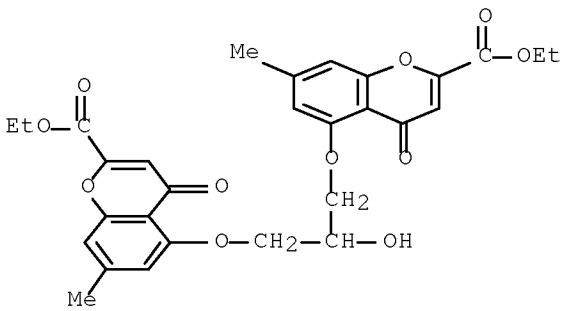




RN 16150-45-1 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, 2,2'-diethyl ester (CA INDEX NAME)



RN 23874-48-8 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxytrimethylene)dioxy]bis[7-methyl-4-oxo-, diethyl ester (8CI) (CA INDEX NAME)



OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L4 ANSWER 2452 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN
GI For diagram(s), see printed CA Issue.

AB The title compds. (I) were prepd. by condensing two mols. II with a compd. AXB in a 1 or 2 step reaction. Thus, 4-methyl-7-hydroxy-8-acetylcoumarin 109, K2CO3 35, epichlorohydrin 26, iso-PrOH 1250, and 40% aqueous PhCH2NMe3OH 1 was refluxed 65 hrs. with stirring, iso-PrOH 1000 distilled, and the residue diluted with H2O 500 to give I [R = Me, R1 = Ac, R2 = R3 = H, X = CH2CH(OH)CH2] 16 parts by weight, m. 234° (EtOH). Similarly prepared were I (R, R1, R2, R3, X, m.p., and % yield given): Me, H, H, AcO, (CH2)5, 205-8° (C6H6-CHCl3), -; Me, H, H, H, (CH2)5, 176-8° (MeOCH2CH2OH), 95; Me, H, H, H, CH2CH(OH)CH2, 110-2° (MeOCH2CH2OH), 35. Also prepared were 1,3-bis(2-acetyl-3-hydroxyphenoxy)-2-propanol, m. 160-5° (EtOH), 1,3-bis(2-carboxychromon-5-yloxy)-2-propanol di-Et ester, m. 180-2° (EtOH-C6H6), and the di-Na salt of 1,3-bis(2-carboxychromon-5-yloxy)-2-propanol monohydrate.

AN 1969:481181 CAPLUS Full-text
DN 71:81181
OREF 71:15037a,15040a

TI 7,7'-(Polymethylenedioxy)bis(4-methylcoumarins)

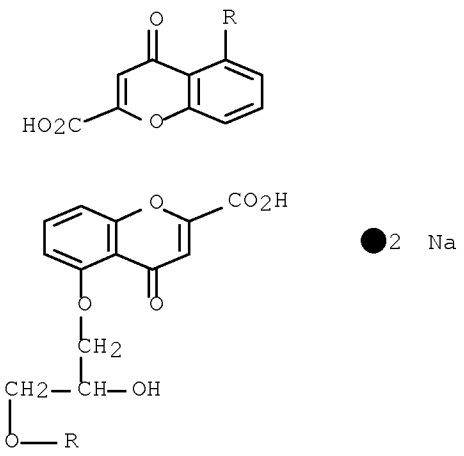
IN Fitzmaurice, Colin; Lee, Thomas Brian
PA Fisons Pharmaceuticals Ltd.

SO Ger. Offen., 16 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1810064		19690619	DE 1968-1810064	19681120
				GB	19671122
	FR 1598304			FR	
	GB 1237878			GB	
	US 3567741		19710302	US	19681121
	ZA 6807363		19680000	ZA	

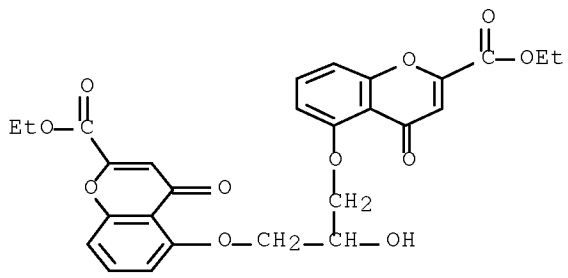
IT 15826-37-6P 16150-45-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 15826-37-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



RN 16150-45-1 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, 2,2'-diethyl ester
(CA INDEX NAME)



L4 ANSWER 2453 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB Phospholipase A (10 μg./ml.) degranulated 62.5% of the mast cells from rat connective tissue in 15 min. at 37.5°; in the presence of 10 μg. disodium cromoglycate (I)/ml., however, only 42.6% of the mast cells were degranulated by phospholipase A. In the reagin antibody/antigen system, 55.4% of the mast cells were degranulated; this was reduced to 32.6% in the presence of I. Addition of I also reduced the histamine release from mast cells by phospholipase A from 21.5 to 7.3%; in the reaginic antibody/antigen reaction, I reduced the release from 31 to 14.9%. I may act on a phospholipid enzyme or some other antibody/antigen activated enzyme or enzymes and thus inhibit mast cell degranulation.

AN 1969:447988 CAPLUS Full-text

DN 71:47988

OREF 71:8811a,8814a

TI Disodium cromoglycate, an inhibitor of mast cell degranulation and histamine release induced by phospholipase A

AU Orr, Thomas S. C.; Cox, J. S. G.

CS Res. Develop. Lab., Fisons Pharm. Ltd., Loughborough, UK

SO Nature (London, United Kingdom) (1969), 223(5202), 197-8
CODEN: NATUAS; ISSN: 0028-0836

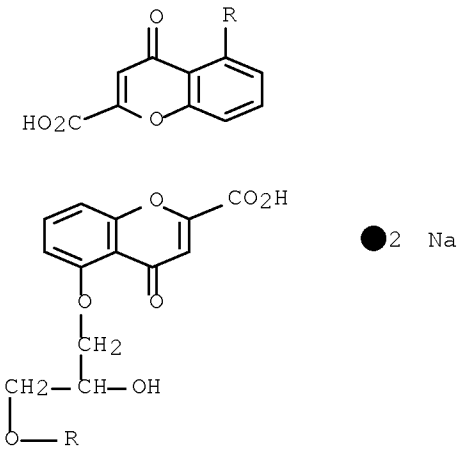
DT Journal

LA English

IT 15826-37-6
RL: BIOL (Biological study)
(mast cells degranulation blocking by)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2)
(CA INDEX NAME)



OSC.G 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L4 ANSWER 2454 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB Studies show max. histamine release at 37-40°. At upper and lower limits release ranges from 4-11%. Ca ions are required to obtain release. Absence of Mg from the reaction medium does not inhibit histamine release. Disodium cromoglycate acts as an inhibitor and also behaves as a weak histamine liberator.

AN 1969:447973 CAPLUS Full-text

DN 71:47973

OREF 71:8807a,8810a

TI Effect of disodium cromoglycate and other inhibitors on in vitro anaphylactic histamine release from guinea pig basophil leukocytes

AU Greaves, M. W.

CS Roy. Victoria Infirmary, Newcastle upon Tyne, UK

SO International Archives of Allergy and Applied Immunology (1969), 36, 497-505
CODEN: IAAAAM; ISSN: 0020-5915

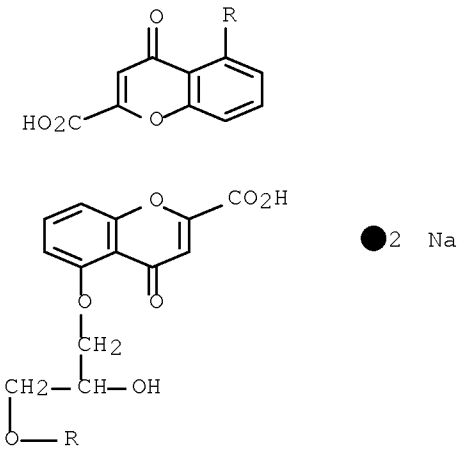
DT Journal

LA English

IT 15826-37-6
RL: BIOL (Biological study)
(histamine in basophils after treatment with, in anaphylaxis)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



L4 ANSWER 2455 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB A comparison between the anaphylaxis induced in rats by rat reagin sera and the cutaneous reaction induced by hyperimmune rabbit anti-ovalbumin serum indicated that the 2 skin responses, of type I and type III, resp., are produced in different ways. The reagin-induced reactions were associated with degranulation of mast cells and were inhibited by disodium cromoglycate, a compound used in treatment of asthma in humans. The disodium cromoglycate interfered with mast cell permeability, apparently after the union of antigen and reagin. It is possible that the critical pathway involved is common to both human and rat reagin systems since both are inhibited by the compound regardless of antigen used.

AN 1969:411317 CAPLUS Full-text
DN 71:11317
OREF 71:2063a,2066a

TI Passive cutaneous anaphylaxis in the rat, induced with two homologous reaginlike antibody sera, and its specific inhibition with disodium cromoglycate

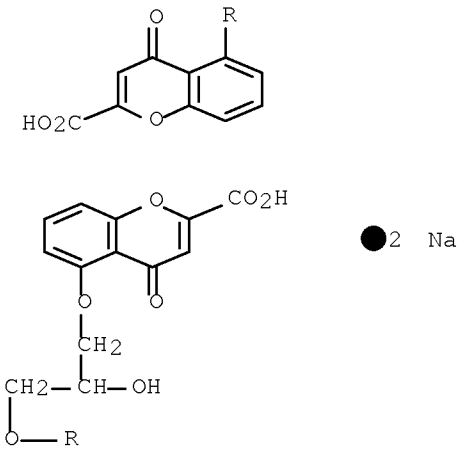
AU Goose, J.; Blair, A. M. J. N.
CS Res. Lab., Fisons Pharm., Loughborough, UK

SO Immunology (1969), 16(6), 749-60
CODEN: IMMUAM; ISSN: 0019-2805
DT Journal
LA English

IT 15826-37-6
RL: BIOL (Biological study)
(as inhibitor of anaphylaxis)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L4 ANSWER 2456 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB Diethylcarbamazine, pipecolamide, nicotinamide, isonicotinic acid hydrazide, and N-amidinobenzamide at doses of 20 mg./kg. i.v. 30 sec. before challenge inhibited by 66, 82, 31, 67, and 44%, resp., the antigen-induced release of slow reacting substance of anaphylaxis in the rat. These effective substances at 10mM concns. had no effect on the viability of rat polymorphonuclear leukocytes suspended in Tyrode solution None of these effective compds. at doses of 30 mg./kg. i.p. 30 min. before challenge significantly inhibited the homocytotropic antibody-mediated release of histamine in the rat. Disodium cromoglycate (50 mg./kg. i.v. 30 min. before challenge) suppressed the homocytotropic antibody-mediated release of histamine without inhibiting the antigen-induced release of the slow reacting substance of anaphylaxis in the rat. Neither diethylcarbamazine nor disodium cromoglycate antagonized the pharmacol. activity of histamine or the slow reacting substance of anaphylaxis in the rat. Thus, the antigen-induced release of slow reacting substance of anaphylaxis and the homocytotropic antibody-mediated release of histamine in the rat can be selectively blocked in vivo by pharmacol. agents which act after antigen and antibody interaction but prior to the formation and release of the mediators.

AN 1969:56183 CAPLUS Full-text

DN 70:56183

OREF 70:10545a,10548a

TI Pharmacologic dissociation of immunologic release of histamine and slow-reacting substance of anaphylaxis in rats

AU Orange, Robert P.; Austen, K. Frank

CS Robert B. Brigham Hosp., Boston, MA, USA

SO Proceedings of the Society for Experimental Biology and Medicine (1968), 129(3), 836-41
CODEN: PSEBAA; ISSN: 0037-9727

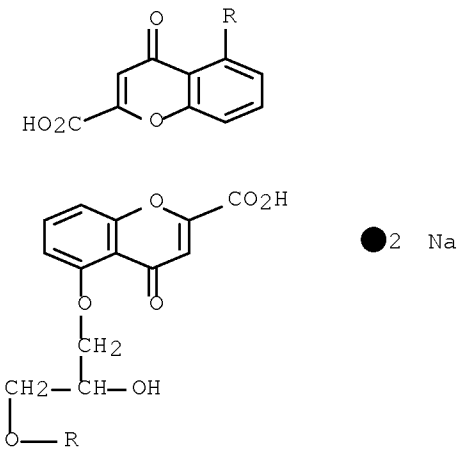
DT Journal

LA English

IT 15826-37-6
RL: BIOL (Biological study)
(in slow-reacting substance release in anaphylaxis)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



L4 ANSWER 2457 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB Inhalation of 20 mg. of the title compd. inhibited all the allergic reactions produced by inhalation of the appropriate allergens in asthmatic patients with various types of allergies. Inhibition of the immediate asthmatic reactions by the drug may be due to interference with the release of histamine and other substances. Inhibition of the late asthmatic and systemic reactions, thought to be precipitin mediated, may in turn result from inhibition of the immediate reaction.

AN 1968:450916 CAPLUS Full-text

DN 69:50916

OREF 69:9499a,9502a

TI Inhibitory effects of disodium cromoglycate [disodium salt of 1,3-bis(2-carboxy-4-oxochromen-5-yloxy)propan-2-ol] on allergen-inhalation tests

AU Pepys, J.; Hargreave, F. E.; Chan, Moira; McCarthy, D. S.

CS Brompton Hosp., London, UK

SO Lancet (1968), II(7560), 134-7
CODEN: LANCAO; ISSN: 0140-6736

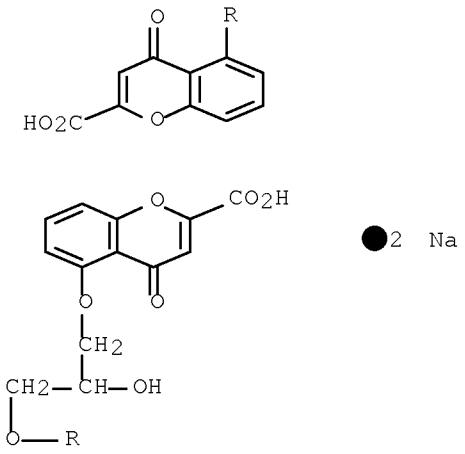
DT Journal

LA English

IT 15826-37-6
RL: BIOL (Biological study)
(allergen reaction inhibition by)

RN 15826-37-6 CAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2) (CA INDEX NAME)



OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L4 ANSWER 2458 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN

AB Di-Na cromoglycate (FPL 670) (Intal) (I) inhibited the passive cutaneous anaphylactic (PCA) reactions in monkeys sensitized with human serum containing reagin, when given intradermally with the antigen, but did not affect the skin reactions to intradermal histamine, 5-hydroxytryptamine, or bradykinin. Homologous PCA reactions with reagin-like antibody in rats, using both the egg albumen-Bordetella pertussis and Nippostrongylus brasiliensis systems, were also substantially inhibited by I, although it did not affect the skin lesions induced by compound 48/80. In contrast, in guinea pigs, homologous PCA reactions with precipitating antibody were unaffected, as were aerosol or i.v. antigen-induced bronchospasm, and the release of histamine and SRS-A (slow reacting substance-anaphylaxis) from actively or passively sensitized lung in vitro. When the release of histamine and SRS-A from chopped human lung, passively sensitized with human reaginic serum, was measured after exposure to specific antigen(s) in vitro, I over a narrow concentration range inhibited the release, and 10 μg. of I/ml. reduced by 40% the contractile response in an in vitro system in which contractions of human bronchial chain, exposed to passively sensitized and shocked human lung, were used to simulate the supposed events in an attack of allergic asthma. I had no adverse effect on several in vitro antibody-virus systems including influenza A, polio virus type II, vaccinia, and herpes simplex with human and rabbit antisera. Likewise, no effect was found on the LD50 in mice of mouse-adapted polio virus, nor on their protection by Salk vaccine; I did not interfere with any of the several bacterial agglutinating systems tested. I, whose action was distinct from that of corticosteroids, had few general pharmacol. effects, was rapidly excreted, and seemed to have a low order of toxicity. I appears to inhibit specifically the anaphylactic process initiated by interactions of reaginic antibody and antigen. This novel property may permit a more specific treatment of allergic disease, especially of the lung.

AN 1968:38047 CAPLUS Full-text

DN 68:38047

OREF 68:7371a,7374a

TI Disodium cromoglycate (FPL 670) ("Intal"). Specific inhibitor of reaginic antibody-antigen mechanisms

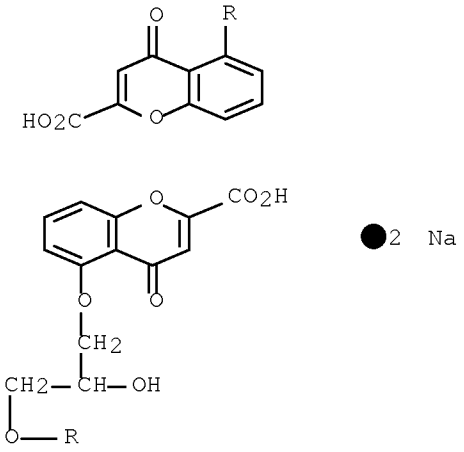
AU Cox, James S. G.

CS Fisons Pharm., Ltd., Holmes Chapel, UK

SO Nature (London, United Kingdom) (1967), 216(5122), 1328-9
CODEN: NATUAS; ISSN: 0028-0836

DT Journal

LA English
IT 15826-37-6
RL: BIOL (Biological study)
(inhibition of antibody-antigen reaction by)
RN 15826-37-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid,
5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, sodium salt (1:2)
(CA INDEX NAME)



OSC.G 44 THERE ARE 44 CAPLUS RECORDS THAT CITE THIS RECORD (44 CITINGS)

L4 ANSWER 2459 OF 2459 CAPLUS COPYRIGHT 2010 ACS on STN
GI For diagram(s), see printed CA Issue.
AB The title compds. I are inhibitors of certain types of antigen-antibody reactions; they are useful in the treatment of extrinsic allergic asthma or intrinsic asthma or of hay-fever, urticaria, auto-immune diseases or virus infections. They can be compounded with bronchodilators when used in inhalation preparation I are prepared by the reaction of II, III, and XAX' (Y is H, Ac, or a carboxylic ester group; Z is OH; or Y and Z (or Y' and Z') form together a chromonyl-2-carboxylic group, X and X' are reactive derivs. which form the ether bond between the 2 parts of the I mol.). Thus, a mixture of 2,6-(HO)2C6H3Ac 30.4, Br(CH2)3Br 20.2, and powdered K2CO3 12.8 in Me2CO 200 parts is refluxed 72 hrs. The precipitate is filtered and washed with Me2CO and H2O. The combined Me2CO and aqueous washing liquors are evaporated to give an oil, which is boiled with Et2O, the obtained precipitate is combined with the first precipitate and the mixture extracted several days in a Soxhlet apparatus with iso-PrOH to give 16.1 parts 2,3-Ac(HO)C6H3O(CH2)3OC6H3(OH)Ac-3,2 (m. 184-5°), of which 6.9 parts in 15 parts (CO2Et)2 are added to a solution of Na 3 in EtOH 30 and C6H6 50 parts. The mixture is refluxed 20 hrs. and poured in Et2O, the precipitate separated and dissolved in H2O, and the solution acidified to give a sticky precipitate which is boiled 10 min. with 50 parts EtOH, containing a catalytic amount of HCl. The mixture is cooled and the precipitate separated and worked up to give 7.8 parts I di-Et ester [A = (CH2)3, 5,5'-isomer] (IV), m. 182-3° (1:2 C6H6-EtOH). A suspension of 3 parts IV in 50 parts boiling EtOH is treated with 11.6 parts 1.015N aqueous NaOH and H2O added until a clear solution is obtained. Working up of the product gives the hydrate of the di-Na salt of I (A = (CH2)3, 5,5'-isomer). Ethyl 7-hydroxychromone-2-carboxylate is heated with 0.5 equivalent 1,5-dibromopentane by heating in Me2CO in the presence of K2CO3 to give I diethyl ester [7,7'-isomer, A = (CH2)5], m. 148-50° (EtOH). [TABLE OMITTED] A

mixture of powdered Na 4.6, IV 7.44, and EtOAc 150 parts is refluxed 2.5 hrs. with stirring. The resulting orange solution is cooled and diluted with 400 parts Et2O. The precipitate is extracted with H2O and the extract acidified. The precipitated oil is extracted with CHCl3 to give an oil which is refluxed 10 min. in EtOH and 0.5 part concentrated HCl. The solution is evaporated and the oily residue rubbed with Et2O to give 4.82 parts 1,5-bis(2-methylchromon-5-yloxy)pentane (V) (m. 140-3°). To a mixture of V 5 in dioxane 100, SeO2 6 parts is added and the mixture refluxed 6 hrs. to give VI. A mixture of PhCHO 1.5 and V 2.7 in EtOH 35 parts is added to EtONa (prepared from 0.294 part Na and 8 parts EtOH) and the solution refluxed 4 hrs. with stirring and left 16 hrs. at ambient temperature to give 1.55 parts 1,5-bis(2-styrylchromon-5-yloxy)pentane (m. 217-20°), which is oxidized with KMnO4 to give VI. A mixture of 1,5-dibromopentane 5.7 in EtOH 80 is added to a solution of KOH 5.6 and hydroquinone 33 in EtOH 40 parts; the solution is refluxed 16 hrs., the EtOH evaporated, and 200 parts H2O added. The mixture is acidified and the precipitate separated and extracted with hot C6H6 to give 1,5-diphenoxypentane, m. 110-12°, 5.8 parts of which is treated with a solution of 1.6 parts NaOH in 10 parts H2O. The H2O is evaporated and the precipitate stirred with 50 parts dioxane under reflux. Dropwise, 6.8 parts diethyl acetylenedicarboxylate is added, and the mixture refluxed 50 min. with stirring. After cooling and acidificaton, the solvent is evaporated to give VII. Ia and I prepared are tabulated in the 1st and 2nd tables.

AN 1967:500002 CAPLUS Full-text
DN 67:100002
OREF 67:18799a,18802a
TI Preparation of dichromonyl derivatives
PA Fisons Pharmaceuticals Ltd.
SO Neth. Appl., 53 pp.
CODEN: NAXXAN
DT Patent
LA Dutch
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
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16129-87-6P 16129-88-7P 16130-23-7P
16130-25-9P 16139-24-5P 16139-25-6P
16139-67-6P 16146-53-5P 16146-54-6P
16150-45-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 15826-37-6 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid,
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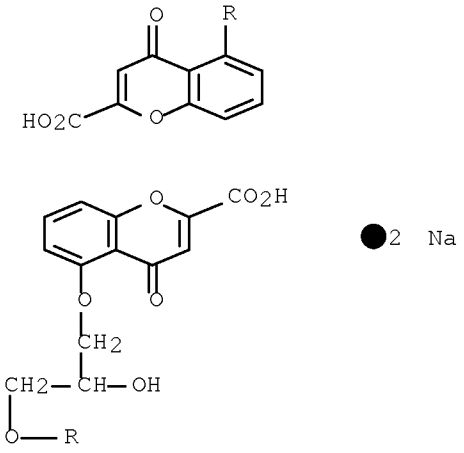

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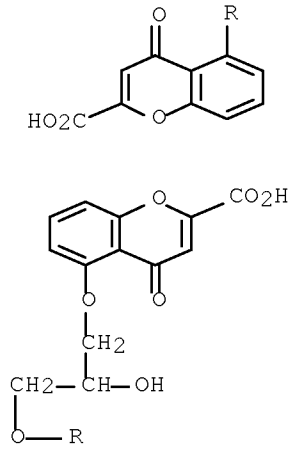

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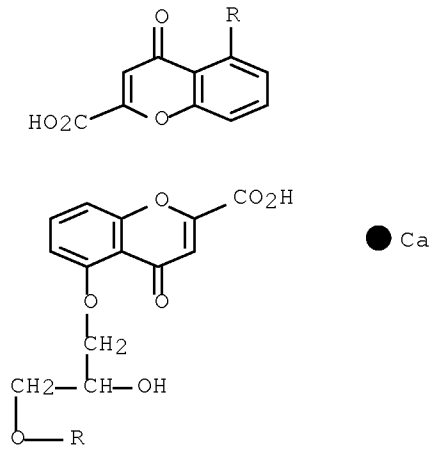
(CA INDEX NAME)



RN 16129-87-6 CAPLUS
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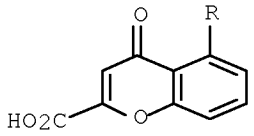
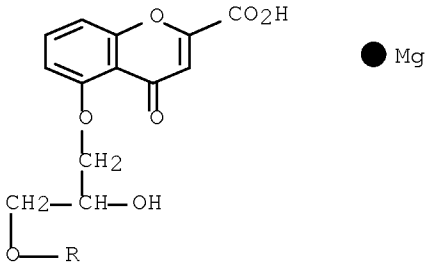
(CA INDEX NAME)





RN 16129-88-7 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, compd. with piperidine (1:2) (9CI) (CA INDEX NAME)

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CRN 16110-51-3
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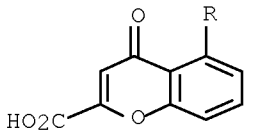
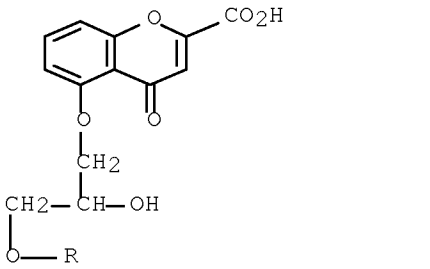
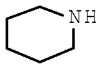




CM 2

CRN 110-89-4
CMF C5 H11 N



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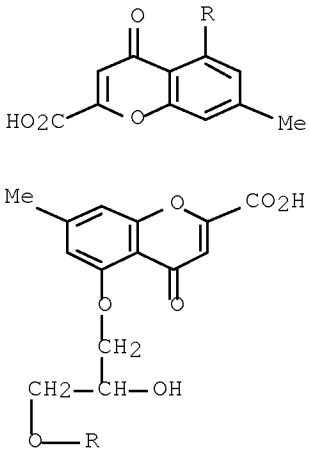
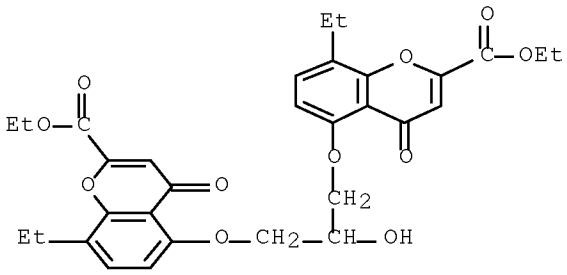


RN 16130-25-9 CAPLUS
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxytrimethylene)dioxy]bis[8-ethyl-4-oxo-, diethyl ester (8CI) (CA INDEX NAME)



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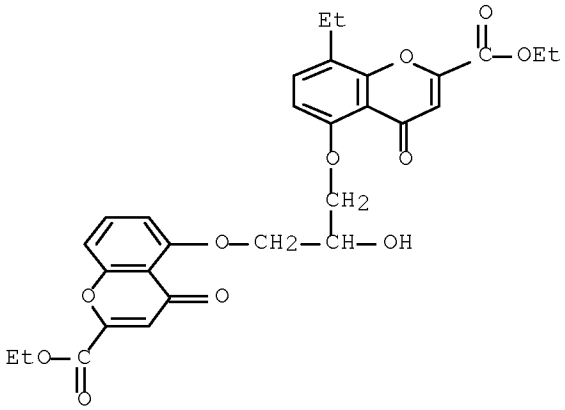
CN 4H-1-Benzopyran-2-carboxylic acid, 5-[3-[[2-(ethoxycarbonyl)-4-oxo-4H-1-benzopyran-5-yl]oxy]-2-hydroxypropoxy]-8-ethyl-4-oxo-, ethyl ester (CA INDEX NAME)



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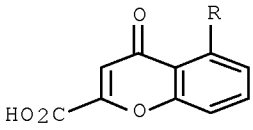
CN 4H-1-Benzopyran-2-carboxylic acid, 5-[3-[(2-carboxy-4-oxo-4H-1-benzopyran-5-yl)oxy]-2-hydroxypropoxy]-8-ethyl-4-oxo- (CA INDEX NAME)

PAGE 1-A



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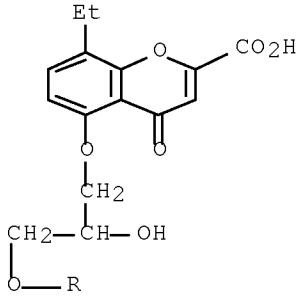

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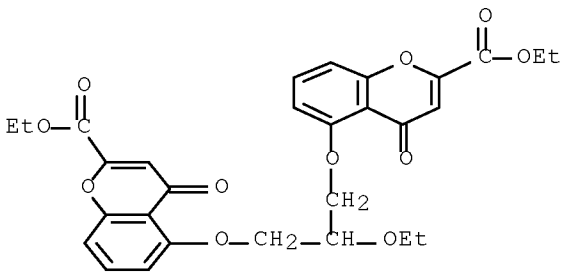

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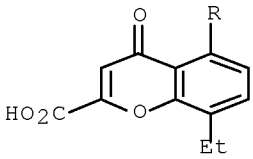
CN 4H-1-Benzopyran-2-carboxylic acid, 5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[8-ethyl-4-oxo- (CA INDEX NAME)

PAGE 1-A



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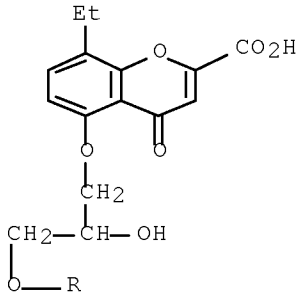

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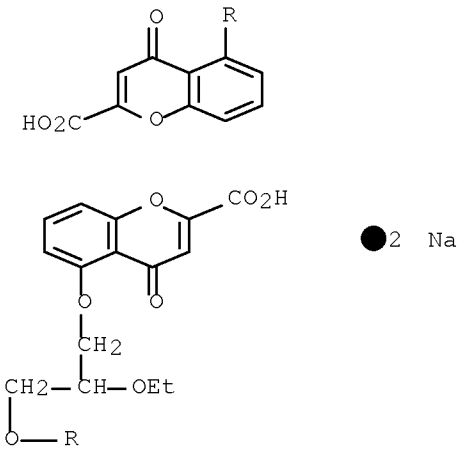

RN 16150-45-1 CAPLUS
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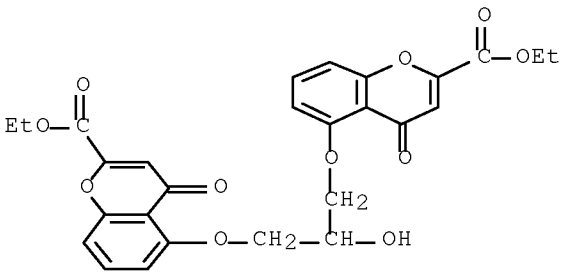
5,5'-[(2-hydroxy-1,3-propanediyl)bis(oxy)]bis[4-oxo-, 2,2'-diethyl ester
(CA INDEX NAME)



OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)